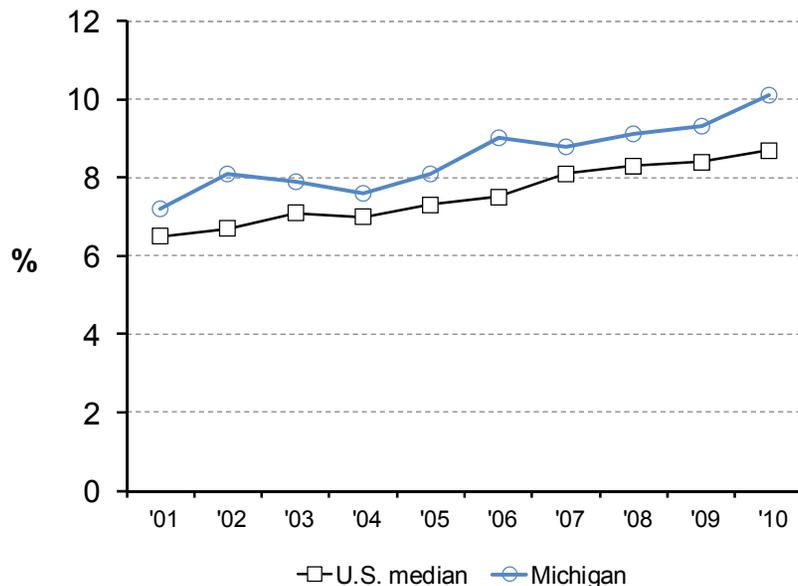


The prevalence of diabetes is increasing

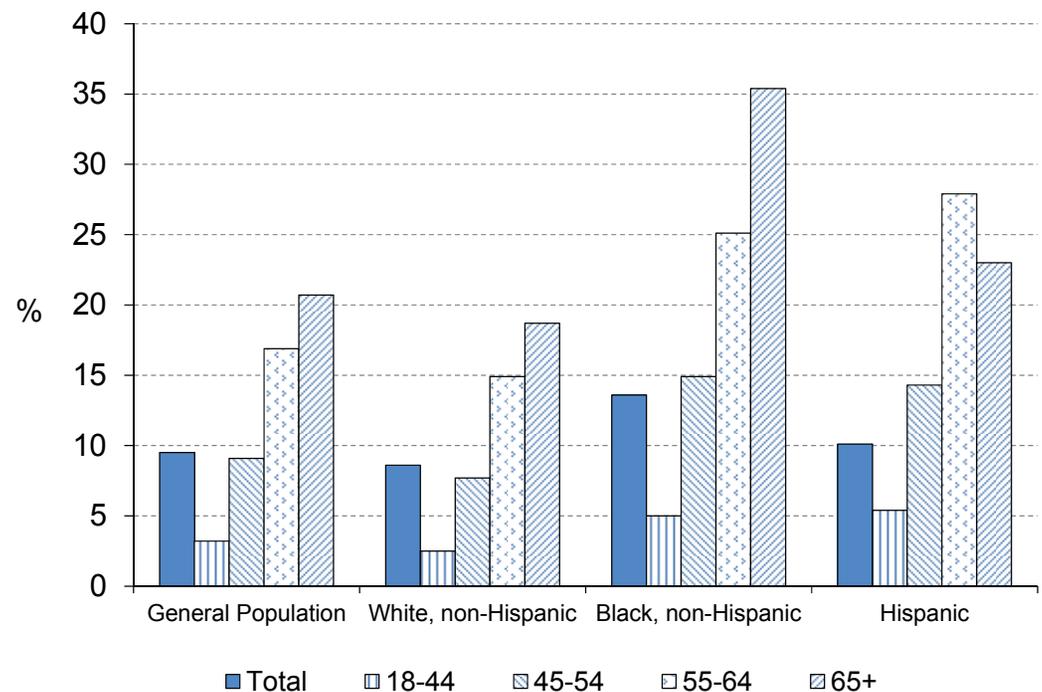
- In 2011, an estimated 10.0% of Michigan adults 18 years and older have been diagnosed with diabetes — about 758,300 people.¹
- An additional 250,200 Michigan adults are thought to have diabetes but are currently undiagnosed.²
- Nationally, approximately 35% of adults age 20 and older are estimated to have prediabetes, putting them at high risk for developing type 2 diabetes.³ However, in 2010, only an estimated 6.4% of Michigan adults reported ever being told they had prediabetes.⁴
- In 2010, Michigan was tied with Arkansas with the 13th highest rate in the nation for diabetes prevalence among adults.⁵
- The prevalence of diabetes among Michigan adults increased by 40% between 2001-2010 (Figure 1).⁴
- In Michigan, the prevalence of diabetes among both African American (5.0%) and Hispanic adults (5.4%) ages 18-44 years was twice that of their White counterparts (2.5%). This disparity between Whites and African Americans continued for older adults, but was not clearly determined for the Hispanic population (Figure 2).⁴
- Prevalence of diabetes among the general population 45-54 years old (9.1%) was nearly three times the prevalence among 18-44 years old (3.2%), supporting the American Diabetes Association (ADA) recommendation for diabetes screening starting at 45 years old (Figure 2).^{4,6}

Figure 1. Diabetes Prevalence among Adults, U.S. vs. Michigan, 2001-2010



Source: CDC BRFSS [www.cdc.gov/brfss] and MiBRFSS[www.michigan.gov/brfs]

Figure 2. Reported Diabetes Prevalence by Race/Ethnicity and Age, Adults, Michigan, 2008-10 Combined



Source: MiBRFSS [www.michigan.gov/brfs]

Diabetes in Michigan Update —2013

There are serious consequences from uncontrolled diabetes

- In 2010, there were 286,368 hospitalizations related to adults with diabetes and 8,584 diabetes-related deaths for all ages.^{7,8}
- Among adults in Michigan, 8,741 diabetes-related stroke hospitalizations and 68,224 diabetes-related cardiovascular disease hospitalizations occurred in 2010.⁷
- In Michigan, 27.4% of adult persons with diabetes (PWD) were previously told by a health care provider that they had a heart attack, coronary heart disease, and/or a stroke.⁴
- In 2011, nearly 24% of Michigan adult PWD reported ever being told that they had diabetes-related retinopathy.⁴
- In 2010, diabetes was responsible for 42% of all new ESRD cases (Figure 3a). The age-adjusted rate of new diabetes-related ESRD cases was 168 per 100,000 PWD in 2010.⁹
- Among adults in Michigan, 75% (2,868) of all non-traumatic lower limb amputations were diabetes-related in 2010 (Figure 3b).⁷

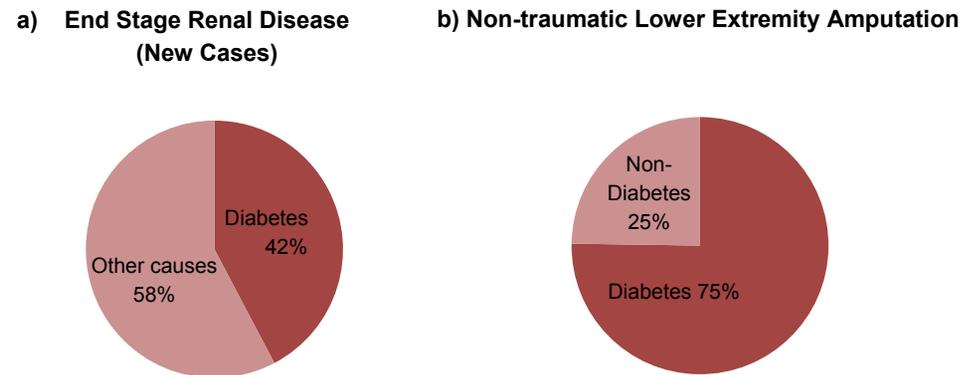
Diabetes is controllable through self-management and healthy lifestyle choices

- Regular exercise can help maintain glycemic (blood sugar) control. The ADA recommends adult PWD perform at least 150 min per week of moderate-intensity aerobic exercise and resistance training at least twice per week.⁶
- Adult PWD in Michigan were more likely to have no leisure-time physical activity than those without diabetes in Michigan (Table 1).⁴
- Unhealthy weight, high blood pressure and high cholesterol were also significantly higher among adult PWD than adult persons without diabetes in 2011 (Table 1).⁴

At least \$8 billion was spent to treat undiagnosed and diagnosed diabetes in Michigan in 2011.¹⁰

Michigan can save \$545 million across all chronic diseases by investing \$10 in preventive care per person per year.¹⁰

Figure 3. Diabetes Complications, Adults, Michigan, 2010



Sources: US Renal Data System and Vital Records and Health Statistics (2010)

Source: Vital Records and Health Statistics

Table 1. Controllable Factors, Adult Persons with Diabetes (PWD) Compared to Adults Persons

Characteristics	Among PWD (%)	People without Diabetes (%)
No leisure-time physical activity	35.2	22.3
Overweight or Obese	89.3	62.8
Obese	61.1	27.9
High blood pressure	78.2	29.3
High cholesterol	69.9	38.0

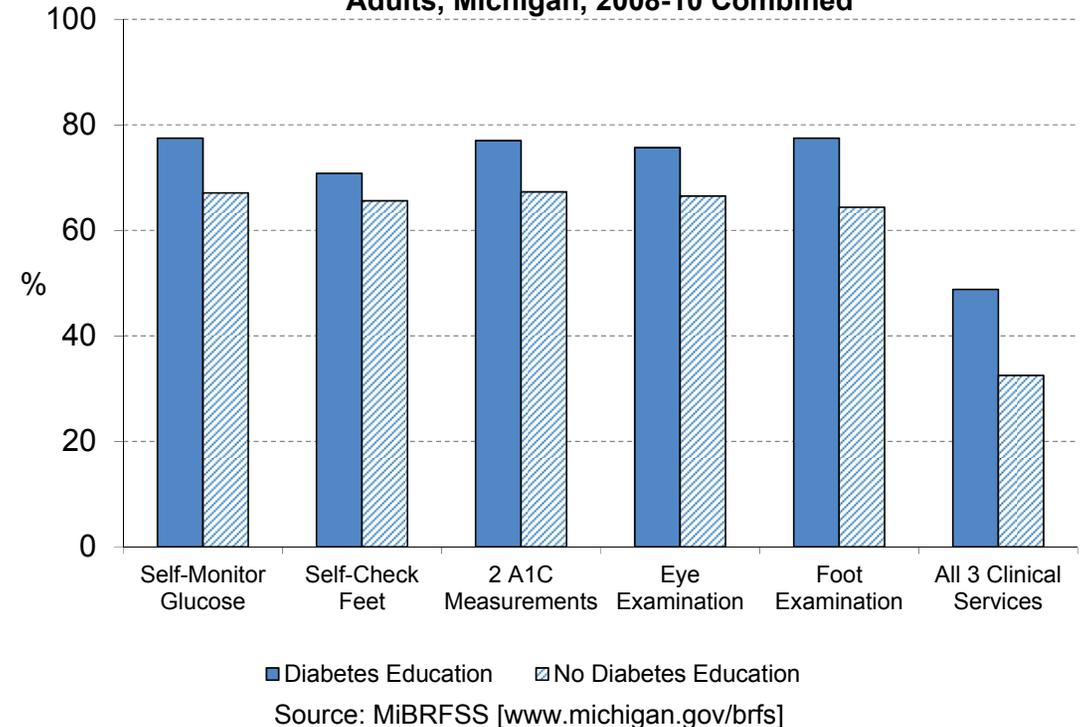
Source: MiBRFSS [www.michigan.gov/brfs]

Diabetes in Michigan Update —2013

Diabetes education works

- Diabetes self-management education (DSME) is a critical element of care for all PWD and those at risk for developing the disease.¹¹
- DSME programs help PWD to prevent or delay the complications of diabetes and manage health care cost.¹¹
- An estimated \$900 per person may be saved annually by PWD who complete self-management education courses.¹²
- In 2011, 54.7% of Michigan adults with diabetes reported receiving formal diabetes education.
- PWD in Michigan who received formal diabetes education showed significantly higher adherence to self management and preventive service recommendations than those who did not (Figure 4).⁴

Figure 4. Diabetes Management by Formal Diabetes Education, Adults, Michigan, 2008-10 Combined



References

- 1 Diagnosed diabetes prevalence from the 2011 Michigan Behavioral Risk Factor Survey and Michigan population estimate from 2011 American Community Survey 1 year estimate. Rounded to nearest 100.
- 2 Undiagnosed diabetes prevalence based on 2005-2008 National Health and Nutrition Examination Survey and Michigan population estimate from 2011 American Community Survey 1 year estimate, Rounded to nearest 100.
- 3 Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.
- 4 Michigan Behavioral Risk Factor Surveillance System, Bureau of Disease Control, Prevention, and Epidemiology, Lifecourse Epidemiology and Genomics Division, MDCH.
- 5 Ranking based on age-adjusted state prevalence estimates for 2010. Centers for Disease Control and Prevention. Diabetes Report Card 2012. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2012.
- 6 American Diabetes Association. Standards of Medical Care in Diabetes—2013. Diabetes Care 36 (Suppl. 1): S11-S66, 2013.
- 7 2010 Michigan Inpatient Database, Division for Vital Records and Health Statistics, Bureau of Local Health and Administration Services, MDCH.
- 8 2010 Vital Statistics, Division for Vital Records & Health Statistics, Bureau of Local Health and Administration Services, MDCH.
- 9 For persons who were on hemodialysis or had a kidney transplant. U S Renal Data System, USRDS 2012 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2012.
- 10 Dall et al. The Economic Burden of Diabetes. Health Affairs 29(2): 1-7, 2010.
- 11 National Standards for Diabetes Self-Management Education and Support. Diabetes Care 36 (Suppl. 1): S100-S108, 2013.
- 12 Rosenzweig JL et al. Diabetes Disease Management in Medicare Advantage Reduces Hospitalizations and Costs. So Am J of Managed Care 16(7): e157-e162. 2007

For more diabetes information in Michigan, please visit www.michigan.gov/diabetes